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**Center for
Army
Analysis**

IRAQI POPULATION DISPLACEMENT ANALYSIS

NOVEMBER 2016



**CENTER FOR ARMY ANALYSIS
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14. ABSTRACT The purpose of this study was to inform CJ34 Civil Military Operations decisions on placement of internally displaced person (IDP) camps in Iraq. The study focused on three main objectives: 1) Determine which factors most influence IDP's choice of displacement location 2) Provide planning factors for each displacement location given specific IDP criteria 3) Provide key insights on IDP behaviors in general. CAA's key findings are as follows: 1) It is expected that 89% of the IDP population from Mosul will displace to seven key districts around Mosul (in five different provinces). 2) IDP camps will attract no more than ~30% of the IDP population. 3) More IDPs reside in paid accommodations than any other type of shelter and would benefit from rent subsidies if offered. 4) IDP movements are not consistent with the perceived sectarian divide as half of the Arab IDPs stay in locations that are not aligned with their ethno-religious majority.					
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IRAQI POPULATION DISPLACEMENT ANALYSIS

SUMMARY

THE PROJECT PURPOSE

The purpose of this study was to analyze the movements of internally displaced persons (IDPs) within Iraq. The analysis supports the Government of Iraq with humanitarian assistance planning.

THE PROJECT SPONSOR

Civil Military Operations (CMO) Officer, Combined Joint Task Force-Operation INHERENT RESOLVE (CJTF-OIR) Non-Lethal Fires (CJ34 NLF) (COL Kyle Riedel)

THE PROJECT OBJECTIVES

- (1) Determine which factors most influence IDP's choice of displacement location.
- (2) Provide planning factors for each displacement location given specific IDP criteria.
- (3) Provide key insights on IDP behaviors in general.

THE SCOPE OF THE PROJECT

- (1) Focuses on the situation in Iraq, specifically considers what will happen when Iraqi Security Forces (ISF)ⁱ retake the city of Mosul.
- (2) Considers IDPs only, ignores refugees.
- (3) Investigate IDP movements to at least the district level using one or more of the following variables:
 - a. destination population
 - b. distance from origin to destination
 - c. civilian casualty numbers at destination
 - d. ethno-religious demographic of the country

LIMITATIONS

- (1) IDP origins are not known below the provincial level.
- (2) Monthly population estimates are unavailable at either provincial or district levels.
- (3) The religious and ethnic identification of historical IDPs are not publicly available.
- (4) Historical IDP data are limited to one civilian collection source, which cannot be corroborated by military reporting and does not account for all IDPs in Iraq.

THE PRINCIPAL FINDINGS

- (1) Static modeling does not work well to predict IDP movements in developing countries. Estimations of future IDP movements out of Mosul used historical data of the last major displacement from Ninewa in summer 2014 and assumed that the vast majority of people remaining in the city are Sunni Arab.
- (2) Based on historical precedence, 89% of the IDP population from Mosul is expected to displace to seven key districts around Mosul (in five different provinces). At the time of the study (summer 2015), six of the seven districts were under ISF control.

- (3) IDP camps will attract no more than ~30% of the IDP population.
- (4) More IDPs reside in paid accommodations than in any other type of shelter and would benefit from rent subsidies if offered.
- (5) IDP movements are not consistent with the perceived sectarian divide as half of the Arab IDPs stay in locations that are not aligned with their ethno-religious majority.

THE PRINCIPAL RECOMMENDATIONS

- (1) Develop an agent-based simulation to track IDP movement more accurately.
- (2) Discourage construction of additional IDP camps.
- (3) Provide cash assistance to those renting.

THE PROJECT EFFORT was conducted by Ms. Sarah Whitesides

COMMENTS AND QUESTIONS may be sent to the Director, Center for Army Analysis,
ATTN: CSCA-OA, 6001 Goethals Road, Suite 102, Fort Belvoir, VA 22060-5230.

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1 INTRODUCTION

An inevitable component to any war is civilian displacement. Knowing how many civilians will displace and where they will go allows military planners to minimize disruption to their operations and limit the number of civilian casualties (CIVCAS) that occur.

1.1 Background

Iraqi Security Forces (ISF) have been combating forces from the Islamic State in Iraq and Syria (ISIS) since December 2013. The conflict generated more than three million internally displaced Iraqis from January 2014 through June 2015.ⁱⁱ Combined Joint Task Force-Operation INHERENT RESOLVE (CJTF-OIR) planners support the Iraqi government by advising them in the development of operational plans. The Civil-Military Operations, CJTF-OIR asked the Center for Army Analysis (CAA) to forecast where Iraqi displaced persons will go during upcoming operations.

1.2 Problem Statement

Civil-Military Operations, CJTF-OIR requests analytic support to:

- (1) Forecast internally displaced person (IDP) movements during upcoming operations.
- (2) Provide guidance on emplacement of IDP camps.

1.3 Purpose

The purpose of this study was to analyze the movements of IDPs within Iraq. The analysis supports the Government of Iraq with humanitarian assistance planning.

1.4 Sponsor

Civil Military Operations Officer, CJTF-OIR Non-Lethal Fires (CJ34 NLF) (COL Kyle Riedel)

1.5 Objectives

1. Determine which factors most influence IDP's choice of displacement location.
2. Provide planning factors for each displacement location given specific IDP criteria.
3. Provide key insights on IDP behaviors in general.

1.6 Scope

1. Focuses on the situation in Iraq, specifically considers what will happen when ISF and/or their allies retake the city of Mosul.
2. Considers IDPs only, ignores refugees.
3. Investigates IDP movements to at least the district level using one or more of the following variables:
 - a. destination population
 - b. distance from origin to destination
 - c. civilian casualty numbers at destination
 - d. ethno-religious demographic of the country

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2 METHODOLOGY

The CAA team conducted a literature review focused on migration and displacement of populated areas. For this study, CAA found the International Organization for Migration (IOM) to be the most relevant and reliable data source. IOM has published monthly Displacement Tracking Matrices (DTM) databases on Iraq's IDPs since early 2014. The IOM is a humanitarian assistance organization that works with the United Nations to provide emergency response services to victims of civil wars and natural disasters. IOM teams are positioned in Iraq to speak with local authorities and personally interview IDPs as they migrate to different areas within the country.ⁱⁱⁱ IOM teams collect very detailed information from IDPs on where they are traveling from/to, when they left their homes, and the type of shelter used.^{iv} This interaction typically takes place when IDPs request some form of aid, resulting in data that excludes IDPs who do not request humanitarian assistance. Judging by the available data, IOM is choosing to release only aggregated data to ensure integrity of their non-profit mission by protecting IDPs from potential attackers. Additional sources of information that informed this analysis are news reports and historical information provided by the Global Culture Knowledge Network, formerly known as the U.S. Army Human Terrain System (HTS). HTS teams, comprised of social scientists, were imbedded by the U.S. Army with various units during the Iraq War to acquire a better understanding of the local population through interactions with community leaders.^v

The study team employed IOM data to craft the initial equation using them as the basis to derive a mathematical model that describes observed displacement patterns to forecast IDP movement during future conflicts. CAA focused the analysis on four factors that have the potential to influence IDP's preference to move to certain areas: population of destination locations, distance from point of origin to destination location, ethno-religious demographics of origin and destination locations, and level of civilian casualties at origin and destination. CAA attempted to correlate these factors with the historical displacement patterns that took place when ISIS took control of Mosul during the summer of 2014.^{vi} If CAA found a strong correlation, then the team attempted to apply the same relationship to observed IDP movement when ISIS fighting took place in Tikrit (Summer 2014)^{vii} and Ramadi (Spring 2015)^{viii} to validate the model.

Additionally, the team incorporated tribal information to balance the modeling effort with some qualitative analysis by using historical information found during the Iraq War as well as published papers. The insights gained into Iraq's complex social network became more important the further the study progressed as forecasting with a static model did not yield usable results. Incorporating sheltering needs of the IDPs was another valuable analytic vein. Each region of the country had its own response to the presence of IDPs.

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3 MODELING EFFORTS

A study published by students at George Mason University (GMU) applied Newton's law of gravitational attraction to the movement of people. It used the relationship of population size of origin and destination countries inverse to the distance traveled between the locations to calculate an attraction for a particular point.

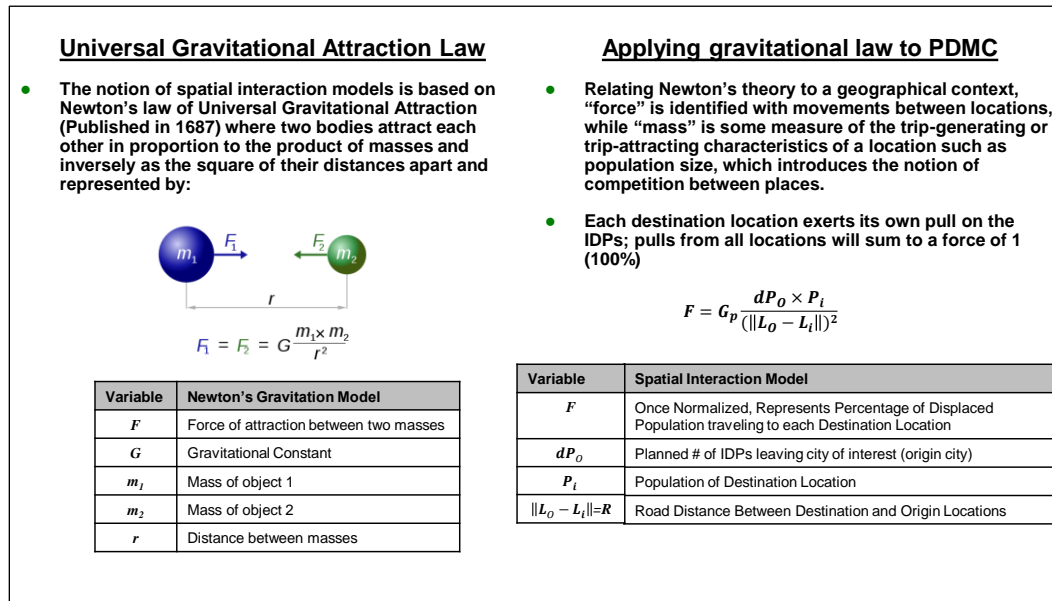


Figure 1. Applying GMU Spatial Interaction Theory to IDP's Movement.

For this study, the team only considered destination cities of more than 50,000 people. After computing all attraction strengths for each potential destination, the team solved for the G factor. This first effort was an optimization problem with the upper bound for each location being an estimate of absorption capacity. The team used the solver tool in Microsoft Excel as a simple test and starting point. Next, the team moved on to using regression analysis between the push and pull factors. Comparing the results of the prediction to the historical case of the summer 2014 displacement event in Mosul, the team found the error rates to be unreasonably high – more than 50%. The team revised the equation to consider weighting for each variable. The application of weights did not drastically change the outcomes of the forecast model. Figure 2 and Figure 3 below capture results of the initial and modified gravity equations. The team ran each equation against three main displacement events that shared similar circumstances: Ninewa (Mosul), Salah ad Din (Tikrit), and Anbar (Ramadi/Fallujah).

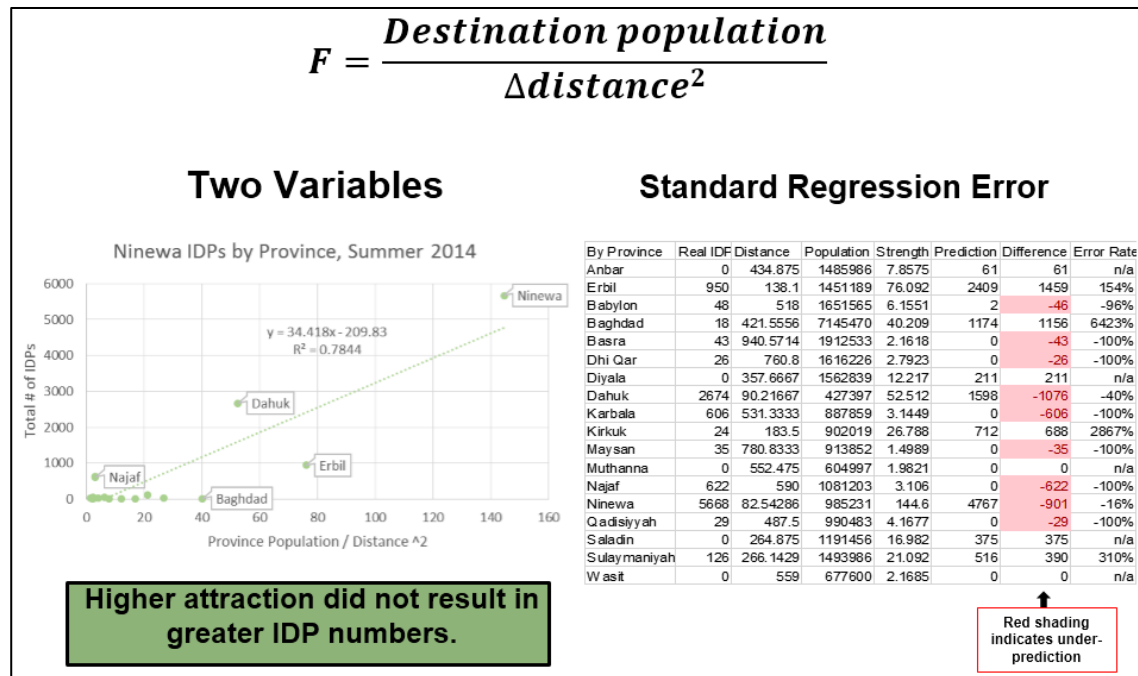


Figure 2. Initial Gravity Equation.

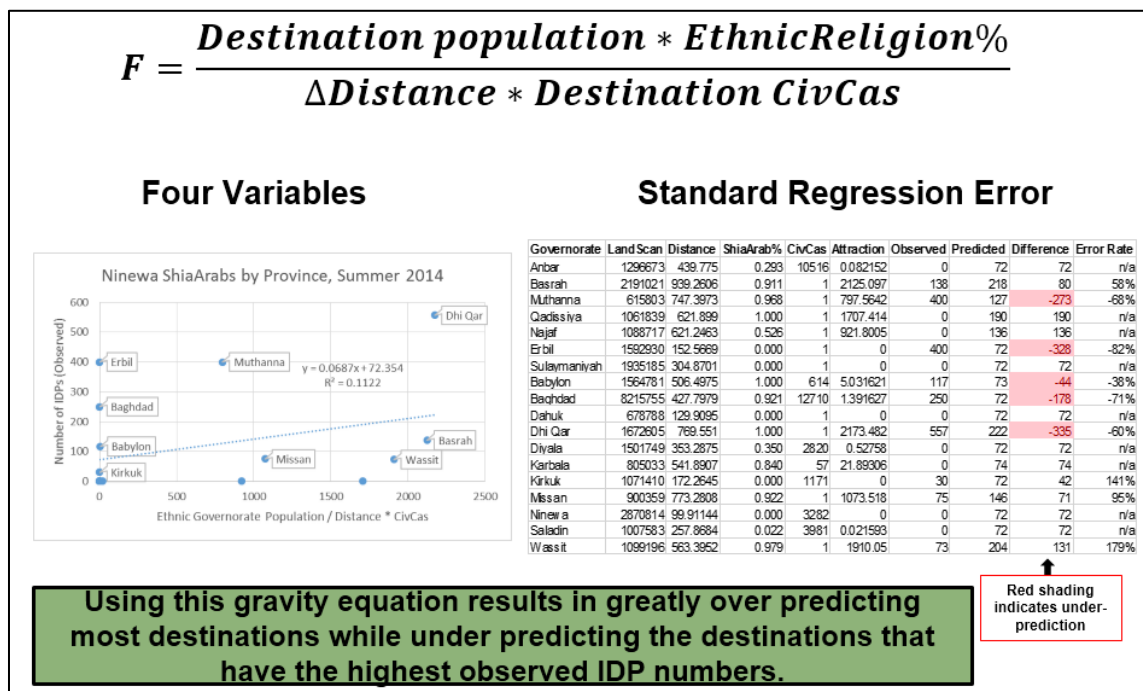


Figure 3. Modified Gravity Equation.

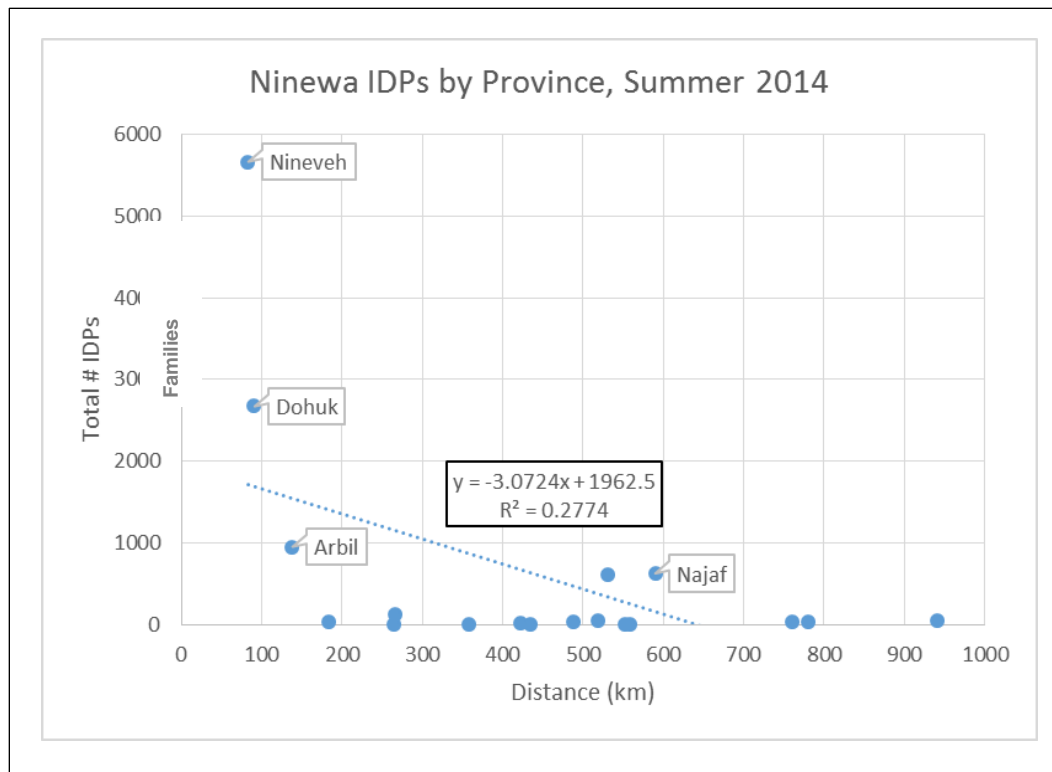


Figure 4. Distance Results.

Distance served as an inverse pull factor and was the most accurate and consistently useful variable in calculating movement. Figure 4 shows that intra-Ninewa displacement was most prominent followed by neighboring Dahuk and Arbil. The team used road distance under the assumption that IDPs who could flee, fled via automobile. The distance traveled by IDPs varied greatly. Analysis revealed that those belonging to the majority ethnic group of an area initially don't move very far and try to wait out the fighting. If possible in the first few days, they will attempt return to their homes. Only when fighting continues for a prolonged period or the safety of the family is in jeopardy, do the IDPs continue movement to a location farther away. So the duration and intensity of the fighting engagement was also a critical factor in displacements to consider.

Using population data skewed the model results as places like Baghdad greatly dwarf smaller locales. Figure 5 below demonstrates that Baghdad was one of the smallest receivers of IDPs in this particular case despite the relative closeness from the conflict area. The combination of destination population against ethnicity/religion was supposed to define the attraction for each ethno-religious IDP group more narrowly, but the complexity of tribal and familial ties undercut this simple classification. The study team determined that ethnicity and religion alone do not provide the specificity needed to account for the tribal and familial connections between one location and another.

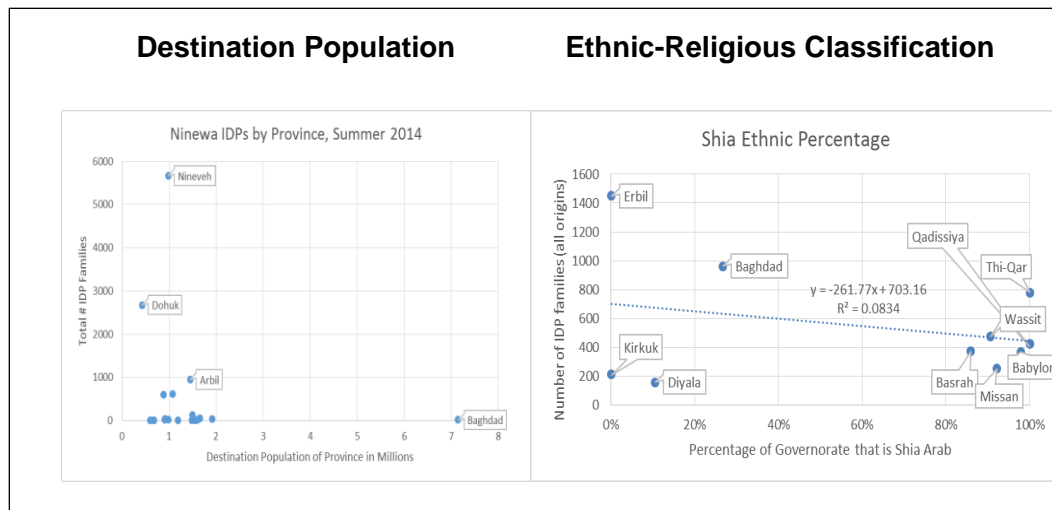


Figure 5. Population and Ethnic-Religious Results.

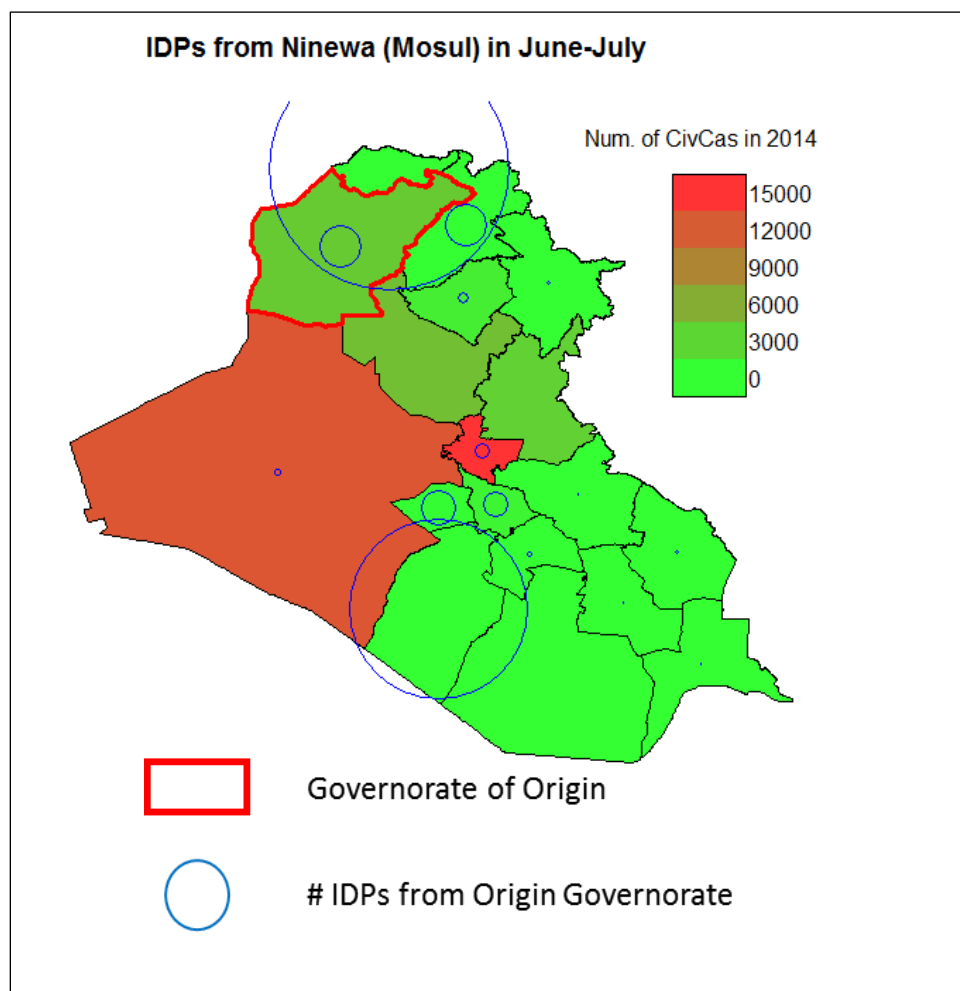


Figure 6. Civilian Casualty Results.

More important than who was at the destination was the security factor. Many of the DTMs cited security as one of the top priorities for IDPs. Unfortunately, the only way to calculate the

security or safety of a destination location objectively was by using United Nations civilian casualty figures, which are incomplete in some areas and not gathered in others. Most likely, IDPs were using word of mouth to reach their own conclusions on security. The team also made an assumption that the autonomous Kurdistan is generally considered more secure than other areas of Iraq, see Figure 6. The team attempted to gather perceptions of safety via new articles, but this proved unwieldy given the short timeline of the study and the factual basis of the data. There also existed the problem that knowledge is not equal from IDP to IDP, which amplifies the amount of uncertainty that measuring this variable brings to the model.

An unaccounted factor the team encountered was the effect travel restrictions had on movement. Some cities were closed off to certain IDPs requiring local sponsorship to gain admittance. Baghdad was particularly stringent on who they allowed in because of fear that ISIS sleeper cells would get in.^{ix} It is possible that this is the reason why more IDPs did not appear to have displaced into Baghdad as mentioned in the previous section on destination population. Future modeling would need to account for this variable that pushes IDPs away from a location.

Ultimately, building an accurate forecasting model proved unreachable in this case as a result of several limiting factors. IOM publishes precise information about current locations of IDP families but they only publish the province of origin rather than the specific district. This lack of data forced the study team to assume that IDPs from Ninewa are the same people who left Mosul during the ISIS invasion, which was likely not always the case. If better-defined origin information was known, this would change the distance calculations and allow for an origin population factor to be used. In the GMU paper, origin population is supposed to be multiplied by the destination population in the numerator of the gravity equation.^x The second issue associated with population was that accurate census data has not existed in Iraq in many years. Any population estimate is a best guess and is likely dated by several years. The most reliable district or higher population estimates came from Oak Ridge Laboratory's LandScan, which uses nighttime lights to project population.^{xi} Efforts at modeling city-level displacement used various sources of population estimations that were different and of questionable accuracy. The third major limiting factor resided in the ethno-religious information on IDPs. IOM published only a single file containing such data and would not share any further identifying information of this nature. Since the use of population and distance alone was not enough information to predict IDP movements, the team knew that they needed to make further distinctions on the IDPs to forecast their future movements. Without it, testing and validating the model was impossible. Lastly, a static model has to make an assumption on the timeframe of the prediction since it provided a single snapshot instead of continuous movement flows. Since IDPs do not migrate away if they suspect the conflict to be short in duration, the study team assumed that the operation to liberate Mosul would last more than 2 weeks and would force IDPs to find more permanent shelters in other parts of the country. However, the team would also need short-term movements if the IDP flows impeded military operations and movement or if the ISF needed to provide redirection and crowd control of fleeing civilians.

The study team attempted to model displacement behavior across three main displacement events due to ISIS, but found no correlation using the available data. The model exhibited large error when applied to other historical events. Therefore, the static model was determined not to be an effective tool to forecast displacement behavior and the study team relied on historical activity to provide a planning tool to the CJTF.

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4 ANALYSIS & RESULTS

4.1 Tribes

Tribal interests count for more than religious or ethnic identity and 75% of Iraqis belong to a tribe.^{xii} The tribal structure in Iraq has several levels. At the top is the tribal confederation or *qabila*. Below the tribal confederation, is the tribe or *ashira*. There are approximately 150 tribes in Iraq today.^{xiii} Tribes are composed of clans, *fakhdh*, which are broken down into houses, *biet*, and then extended families, *khams*. Some of the tribal confederations have relationships that form ‘super confederations’ as is the case with Zubayd. Jibour, Dulaym, Janab, Azza, and Ubayd govern themselves but are part of the original Zubayd lineage.^{xiv} It’s hard to map precise locations of each tribe and the confederation that they belong to because there are generally no definitive boundaries established – the situation is much more fluid. Out of the 10 major federations, seven have a mix of Sunni and Shia membership.^{xv} This illustrates the heterogeneous nature of Iraq, at least in respect to the religious divide. In Figure 7 below, ethnic mix is prominently displayed in the cities of Mosul, Arbil, and Kirkuk, as areas closer to Kurdistan have been historically cosmopolitan.^{xvi}

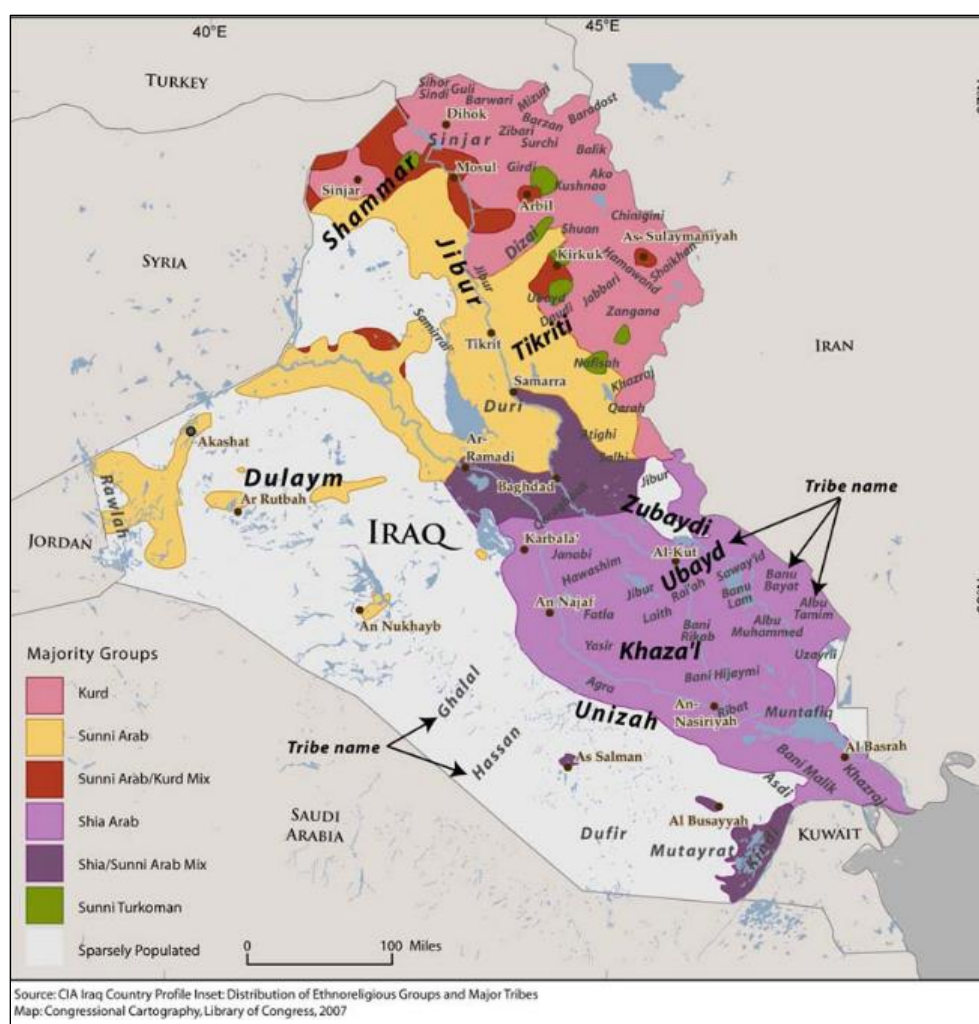


Figure 7. Majority Groups in Iraq.

Attempting to create a matrix of all tribal connections became very complex very quickly. Figure 8 attempts at capturing the tribal placement across Iraq. Mapping at the confederation level would have been much easier to complete but highly inaccurate at capturing the complex nature of these alliances. Each tribe is more loyal to its clans and houses than what are essentially distant relatives in the confederation. The confederations are beneficial when it comes to political maneuvering or defending against major attacks but serve little purpose otherwise. In and around Mosul, Jibour and Tay are the primary tribal units. Within Iraq, IDPs affiliated with the Tay group are likely to displace Northwest within Ninewa or head South just past the city of Tikrit. IDPs affiliated with the much more prominent Jibour federation, have many more options to employ. There are Jibour areas in Arbil, Salah ad Din, Kirkuk, Diyala, Wasit, and Qadisiyah.

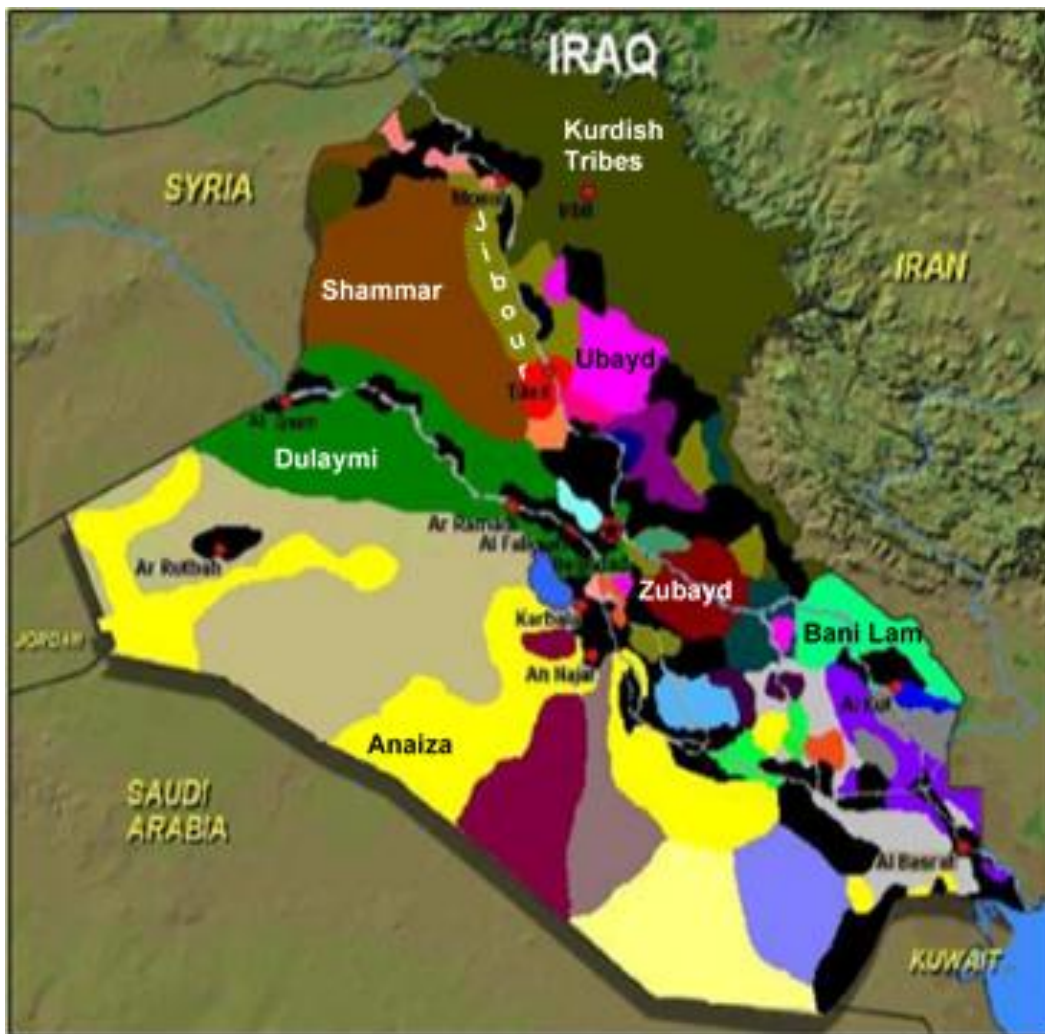


Figure 8. Tribal Map of Iraq.

4.2 Linguistics

The team also explored the mapping of ethno-linguistics to forecast IDP movements. A study on Syria refugees into Turkey successfully predicted refugee movements out of Syria to specific places in Turkey.^{xvii} The team looked into the likelihood that applying this method to internal

displacement would provide the same success. There are 23 spoke languages in Iraq; 6 distinct dialects are present for Arabic alone.^{xviii} Half of the languages are spoken by an insubstantial number of Iraqis. Of the remaining viable languages, three groupings appear; those that speak a form of Arabic, those that speak a type of Kurdish, and the Syriac scripts. Figure 9 maps the language families' geographic dispersion within Iraq according to Ethnologue. Richey used the same basic construct of the gravity equation as this study and applied it to geospatial modeling.^{xix} The representation for each language was shown at a district level. Each language was weighed according to directionality, status, language family, linguistic similarity to another. Using Annex II^{xx} as a template, each district was input with its relevant information and the equation was applied to give the migration results. The use of linguistic in forecasting IDP movements was not any better than previously attempting modeling.

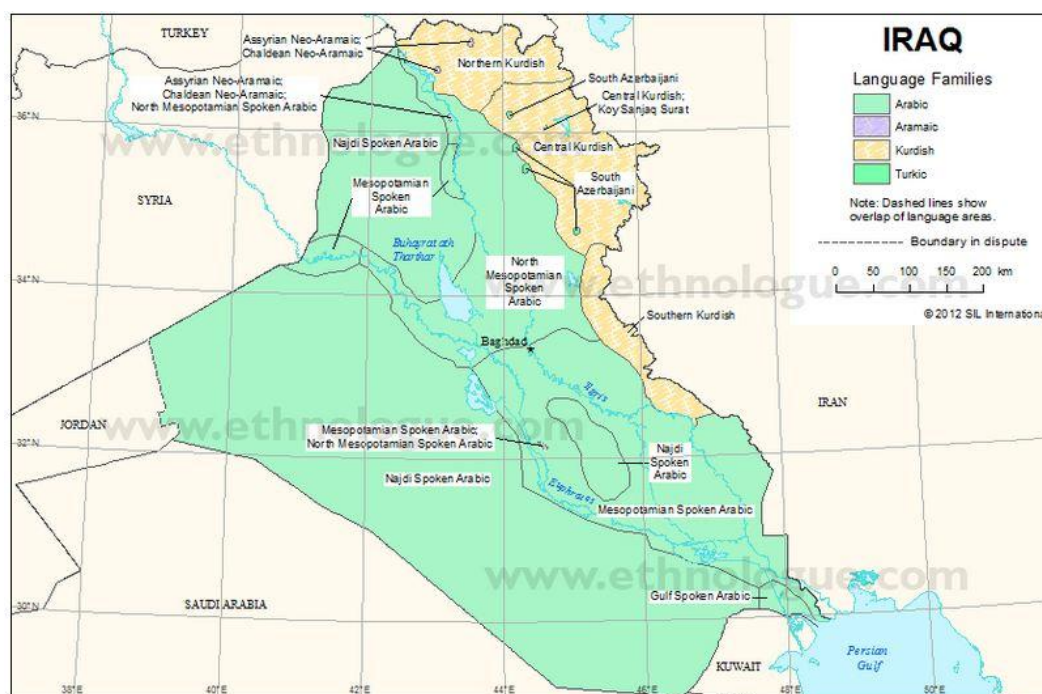


Figure 9. Iraq Language Families.

4.3 Sheltering

There are 40 open IDP camps^{xxi} throughout Iraq that support less than 10% of the IDP population. However, more than 65% of identified IDPs report being housed in private settings such as rented houses, hotels/ motels, and host families. Approximately 20% of IDPs stay in critical shelters such as abandoned buildings, empty schools, religious buildings, or other similar locations.^{xxii} Figure 10 provides a snapshot of the families housed in critical shelter sites from May 2015. The families staying in critical shelters are often people who do not have a network of family and friends to rely upon, and are more vulnerable than those staying with relatives. IDPs in critical shelters have the highest need for additional assistance because their living conditions are poor, less secure, and overcrowded.^{xxiii}

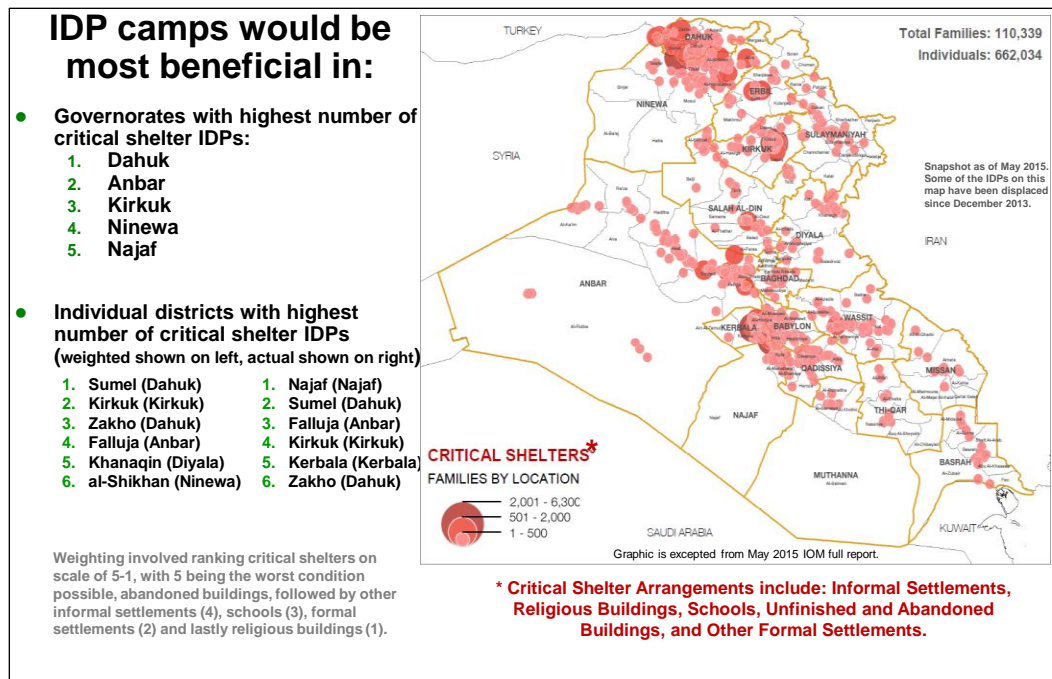


Figure 10. Critical Shelters.

On average, approximately 39% of all IDPs stay in paid accommodations. This group could benefit from receiving cash assistance to pay their rent. This would be especially helpful for IDPs located in Arbil and Sulaymaniyah, where over 70% of IDPs stay in paid accommodations. The concern of a protracted stay in paid accommodations becomes the issue of how IDPs support themselves as their financial resources are depleted. Many IDPs who are displaced for longer periods are unable to find adequate employment and, as a result, will often experience multiple re-displacements to progressively less desirable living conditions.^{xxiv} Interviews and news reports indicate that as IDPs become more desperate, they will sell whatever they can, to include vehicles^{xxv} and even body parts^{xxvi}, to maintain current housing conditions. Some IDPs acquire rent subsidies through nongovernmental organizations or religious organizations to alleviate the burden of housing costs, but it is still unknown how much the IDPs fund themselves.^{xxvii}

4.4 Mosul Displacement

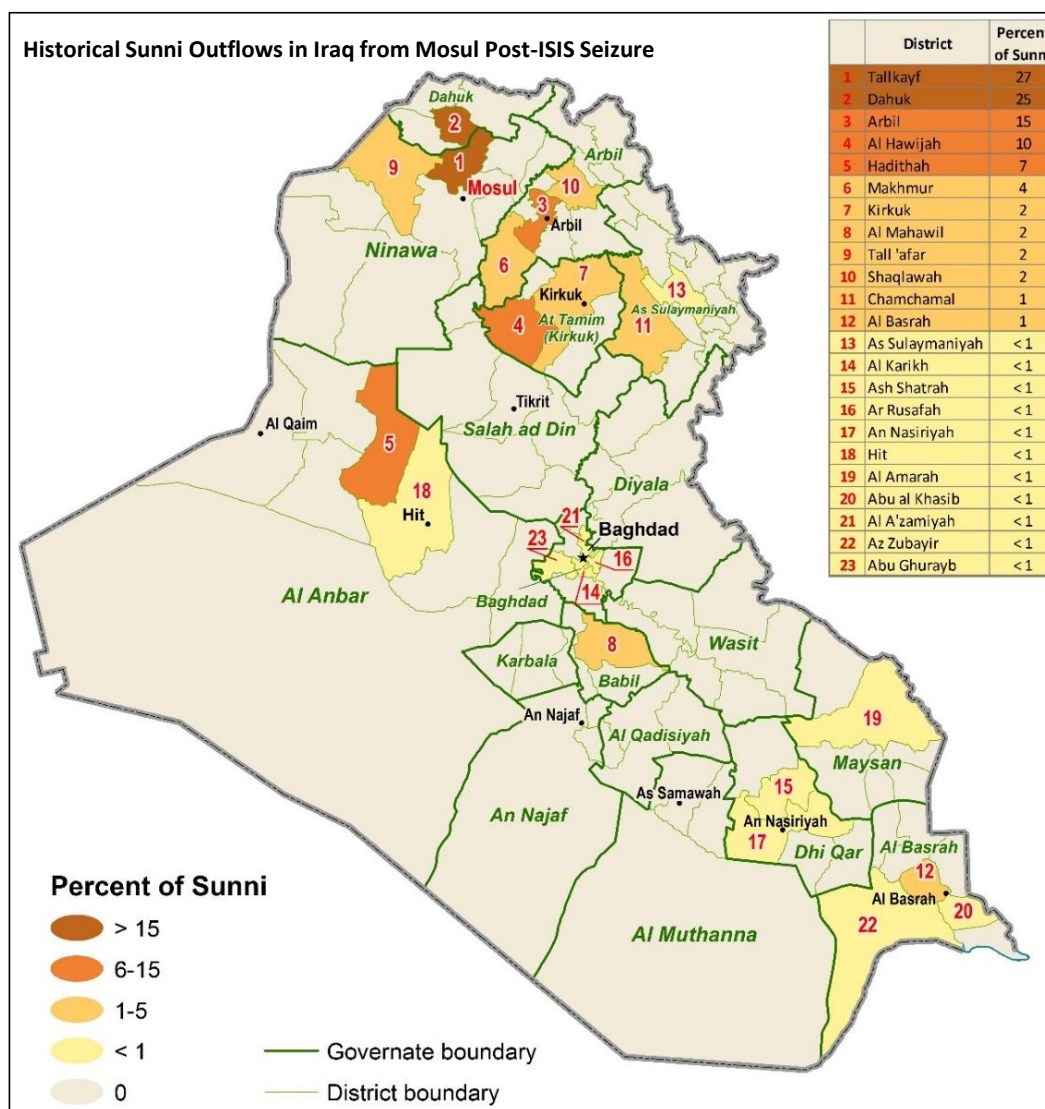


Figure 11. Locations of Non-Kurdish Sunni IDPs from Mosul, Summer 2014.

Mosul is a complex urban development in the province of Ninewa that housed a sectarian-diverse population before ISIS invaded. The team's displacement forecast uses past behavior as a baseline and modifies it based on the current operational environment to achieve expected future movements. Since a part of ISIS ideology is a holy war against non-Sunnis, a large number of Shiites have already fled to other provinces. The June-July 2014 IOM DTMs show that the majority of Shia IDPs from Mosul went to An Najaf, mainly seeking refuge in mosques.^{xxviii} Najaf and neighboring Karbala are locations of the most sacred Shia religious sites. One can infer that Shia Iraqis choose their displacement locations mainly due to their religious identity. Due to the prior large outflow of Shiites and Kurds from Mosul, it is likely that the Iraqi populations currently remaining in Mosul are non-Kurdish Sunni. Figure 11 shows the specific districts where non-Kurdish Sunni IDPs migrated after ISIS took control of Mosul around June-July 2014.

Of the non-Kurdish IDPs from Mosul that identify themselves as Sunni, 89% are located in seven of these districts. These districts (provinces) are Tallkayf (Ninewa), Dahuk (Dahuk), Arbil (Arbil), Al Hawijah (Kirkuk), Hadithah (Anbar), Makhmur (Arbil), Kirkuk (Kirkuk). Almost all of the districts listed above reside in close-by Kurdish areas that IDPs perceive as a region of relative safety.^{xxix} Although the exact same migration is unlikely during the retaking of Mosul, knowing where Sunnis traveled to before gives an indication of what to expect in the future. It is also possible that some Sunnis will decide to stay in their homes and wait until the fighting draws down. Depending upon the length of conflict, these families will need support in terms of food, water, and medical supplies.

4.5 Anbar Displacement

Future operations may necessitate planning for IDP movements starting from other parts of the country. Sunni Iraqis do not show a definite displacement pattern along sectarian boundaries throughout the country. The behavior of those leaving the Anbar province (see Figure 12) greatly differed from those displacing from provinces further north. Baghdad is both closer to Anbar residents and less expensive to live in compared to Kurdistan.^{xxx} However, IDPs from Anbar have trouble crossing the Baghdad province border due to security restrictions that require local sponsorship for entry at several areas.^{xxxi} This is why most IDPs from Anbar displaced within the province.^{xxxii}

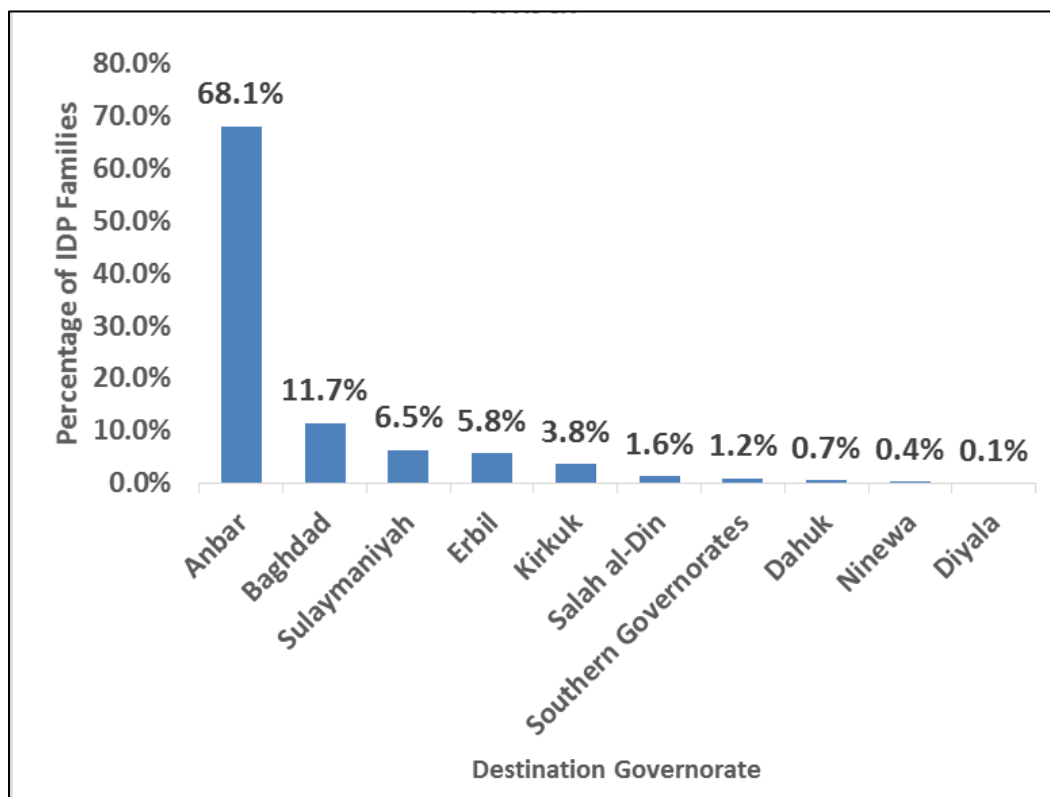


Figure 12. Historical Movement of Sunni Arabs from Anbar, December 2013 – August 2014.

APPENDIX A PROJECT CONTRIBUTORS

A-1 PROJECT TEAM

Project Director: Ms. Sarah Whitesides

Team Members: Mr. Jay Sanchez, CPT Chris Rivers, CPT Pam Rainey, and Ms. Gale Collins

A-2 PRODUCT REVIEWERS

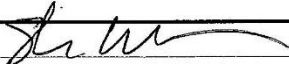
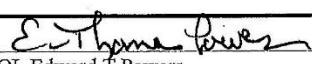
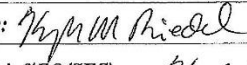
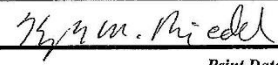
COL E. Thomas Powers, Operations Analysis Division Chief

Mr. Russell Pritchard, Quality Assurance

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APPENDIX B REQUEST FOR ANALYTICAL SUPPORT

REQUEST FOR ANALYTICAL SUPPORT

Performing Division: OA		Account Number: 2015098	FY: 2015
Acronym: PDMC		Start Date: 22-Apr-15	Est Compl Date: 30-Jun-15
Title: Population Displacement Model for CJTF-OIR			
Category: Stability Operations Analysis			Method: In-house
Sponsor (i.e., DCS-G3) Name: USCENCOM		Office Symbol: CJ34 NLF CMO	
Phone:	E-Mail:	POC: COL Kyle Reidel	
Resource Estimates:	a. Estimated PSM:	b. Estimated Funds:	
Models to be Used:		Product: Analytical Tool	
Description/Abstract: The Center for Army Analysis develops a population displacement model to show likely locations for population displacement and movement routes to support Combined Joint Task Force-Operation Inherent Resolve (CJTF-OIR) Civil-Military Operations (CMO) advise and assist planning efforts during conflict events.			
Study Director/POC Signature: 		Phone: 703-806-5467	
Study Director/POC: Ms. Sarah L. Whitesides			
PART 2			
Background/Statement of Problem: There is limited data available for operations forecasting to support CJTF-OIR CMO planning. The analysis as currently conducted provides rough estimates of population displacement numbers resulting from combat operations and does not address the movement routes and anticipated locations of internally displaced populations (IDP). The desire for timely and relevant analysis to support time sensitive operational forecasting is strongly desired at this command as IDPs are a key issue within many planning staff sections. Comments made by the DCOM at Battle Update Assessments impress this need.			
Scope:			
Issues:			
Milestones: IARB: TBD FARB: TBD (Results to sponsor NLT 30 June 2015)			
Signature	CAA Division Chief Signature: 		Date: 23 APR 2015
	CAA Division Chief Name: COL Edward T. Powers		
	Sponsor Concurrence Signature: 		Date: 24 APR 2015
	Sponsor Name (COL/DA Div Chief/GO/SES): 		

Print Date: 23-Apr-15

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APPENDIX C ENDNOTES

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- ⁱ The term ISF encompasses Kurdish Peshmerga fighters as well as the Iraqi Army and police force.
- ⁱⁱ <http://iomiraq.net/article/0/iom-displacement-iraq-tops-3-million>
- ⁱⁱⁱ <http://iom.int/countries/iraq>
- ^{iv} Displacement Tracking Matrix, “20150622_01_IOM_DTM_Publish_DTM_Master_List.xls”
- ^v <http://humanterrainssystem.army.mil/>
- ^{vi} <http://www.theguardian.com/world/2014/jun/10/iraq-sunni-insurgents-islamic-militants-seize-control-mosul>
- ^{vii} http://www.huffingtonpost.com/2014/06/11/isis-militants-seize-tikrit_n_5484335.html
- ^{viii} <http://abcnews.go.com/Politics/ramadi-fell-isis-fighters-vastly-outnumbered-iraqi-troops/story?id=31322017>
- ^{ix} <http://www.irinnews.org/report/101381/displaced-iraqis-blocked-baghdad>
- ^x Gulden, Timothy, Harrison, Joseph F., and Crooks, Andrew T. (2011). “Modeling Cities and Displacement through an Agent-based Spatial Interaction Model,” George Mason University.
- ^{xi} <http://web.ornl.gov/sci/landscan/index.shtml>
- ^{xii} Al-Tikriti, Nabil (2009). “There go the Neighborhoods: Policy Effects vis-à-vis Iraqi Forced Migration”.
- ^{xiii} Hassan, Hussein D. (2007). “Iraq: Tribal Structure, Social, and Political Activities,” CRS Report for Congress. <http://fpc.state.gov/documents/organization/81928.pdf>
- ^{xiv} U.S. Army Human Terrain System, “OIF Tribes of Iraq”, Excel file.
- ^{xv} Ibid.
- ^{xvi} Al-Tikriti, Nabil (2009). “There go the Neighborhoods: Policy Effects vis-à-vis Iraqi Forced Migration”.
- ^{xvii} Richey, Melonie K. (2013). “Turkey: A Geocultural Analysis,” Mercyhurst University.
- ^{xviii} <http://www.ethnologue.com/country/IQ>
- ^{xix} Richey, Melonie K. (2013). “Turkey: A Geocultural Analysis,” Mercyhurst University.
- ^{xx} Ibid.
- ^{xxi} https://www.humanitarianresponse.info/en/operations/iraq/infographic/iraq_cccm_idp_settlement_status_map_16_July_2015
- ^{xxii} DTM ROUND XXII JUNE 2015
- ^{xxiii} REACH, *Vulnerability, Needs and Intentions of Internally Displaced Persons in Northern Iraq*. July 2014, p. 1
- ^{xxiv} <http://refugeesinternational.org/where-we-work/middle-east/iraq>
- ^{xxv} <http://www.unhcr.org/559160dc6.html>
- ^{xxvi} <http://www.niqash.org/en/articles/society/5042/>
- ^{xxvii} Internal Displacement Monitoring Centre. <http://www.internal-displacement.org/middle-east-and-north-africa/iraq/2015/iraq-idps-caught-between-a-rock-and-a-hard-place-as-displacement-crisis-deepens>
- ^{xxviii} Displacement Tracking Matrix, “28082014_master_list_final.xlsx”
- ^{xxix} REACH, *Vulnerability, Needs and Intentions of Internally Displaced Persons in Northern Iraq*. July 2014, p. 10
- ^{xxx} <http://reliefweb.int/report/iraq/displacement-snapshot-erbil-september-2014>
- ^{xxxi} <https://www.bostonglobe.com/opinion/editorials/2015/05/27/sunnis-fleeing-isis-must-treated-humanely-iraq/UJNLF9EIM63gbZpCXao1TO/story.html>
- ^{xxxii} DTM “20150622_01_IOM_DTM_Publish_DTM_Master_List.xls”

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